

IN THE CLAIMS:

Please amend claims 1, 3, and 9 as follows:

1. (once amended) An environmentally stable non-leaching cement product of a process for thermo-chemical remediation and decontamination of sediments and soils contaminated with organic materials as well as inorganic contaminants and heavy metals, the process comprising the steps of:

- a) blending said contaminated sediments or soils with a calcium oxide source, alumina, ferric oxides and fluxing agent to form a mixture;
- b) heating the mixture above the melting temperature of said mixture to produce a completely molten homogeneous reaction product;
- c) bubbling oxygen through the molten reaction product for destruction of said organic contaminants;
- d) quenching the reaction product in the presence of moist air, steam or water to form a reactive amorphous material having a silicate network, and thereby incorporating inorganic contaminants and heavy metals within the silicate network;
- e) pulverizing the reactive amorphous material to form a reactive cementitious powder having a molar acidity of about 1.0 to about 2.5;
- f) blending the cementitious powder with cement to yield a stable blended non-leaching cement.

3. (twice amended) A generally homogeneous non-leaching reactive cementitious melt product which is amorphous and [has the composition of] comprising: calcium oxide (CaO), about 20 to 40 wt%; silica (SiO₂), about 45 to 65 wt%; alumina (Al₂O₃), about 5 to 20 wt%; ferric oxide (Fe₂O₃), about 2 to 10 wt%; and fluxing agent [about 0 to 5 wt%].

9. (once amended) A blended cement comprising a mixture of portland cement and a reactive melt product, said reactive melt product [including] is a generally homogeneous [mix of] amorphous non-leaching cementitious melt product comprising CaO, SiO₂, Al₂O₃, Fe₂O₃ and CaF₂, the weight ratio of reactive melt product to portland cement being from about 10 parts of reactive melt product to about 90 parts of portland cement up to about 70 parts of reactive melt product to about 30 parts of portland cement.

REMARKS

In the above identified Office Action the Examiner has rejected claims 1-11 as being unpatentable over Rostoker et al., Mason et al., Pichat, Meegoda et al., and Detering et al. in view of Lewis. Applicant has amended the above claims so as to recite over each of the above references and their combination with Lewis. None of the above references, teach the blending of contaminated sediments with the recited additives to form a completely molten homogeneous reactive mix by heating the mixture above the melting temperature of the mixture. Rostoker teaches the melting of the contaminated soil with metal oxide wastes under reducing